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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,606	02/12/2004	Takeshi Kakuta	Q79732	3949

23373 7590 12/13/2005  
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WASHINGTON, DC 20037

EXAMINER
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CAO, ALLEN T

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/776,606

Applicant(s)

KAKUTA ET AL.

Examiner

Allen T. Cao

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/12/04 and 8/12/04</u> | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2652

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

2. The disclosure is objected to because of the following informalities: The disclosure does not have a section of "Brief Description of the Drawings".

Appropriate correction is required.

3. Claims 5-8 are objected to because of the following informalities: The terms "a" and "an" in front of the terms "peak" and "E1'/E2'" should be changed to --the--, respectively. Appropriate correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata (US 2002/0127367 A1) in view of JP02002088325A and Bennett et al (US. 6,815,035 B2).

Shibata discloses an optical information recording medium having a substrate 12, a recording layer 16, an adhesive layer 20 and a transparent sheet 22 provided in this order as set forth in claim 1.

However, Shibata does not disclose that the adhesive layer has a peak of loss modulus at a temperature of 0°C or less and exhibits an  $E1'/E2'$  ratio of 2.0 or less; wherein  $E1'$  and  $E2'$  represent storage moduli of the adhesive layer at 25°C and 80°C, respectively as recited in claim 1.

JP ('325) discloses a semiconductor device having an adhesive layer which has a peak of loss modulus at a temperature of 0°C or less (-80°C to 50°C includes the range of 0°C or less and which is satisfied the claimed range of 0°C or less).

Bennett et al discloses an optical disc (DVD) having an adhesive layer 18 which has exhibits an  $E1'/E2'$  ratio of 2.0 or less; wherein  $E1'$  and  $E2'$  represent storage moduli of the adhesive layer at 25°C and 80°C, respectively. See TABLE 3A shows that the storage modulus at 23°C (substantially 250C) / the storage modulus at 80°C is equal to "2.0 or less".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the adhesive of Shibata with an adhesive as set forth, supra as taught by JP ('325) and Bennett et al through an obvious routine lab experimentation and optimization an excellent durability bond and preventing corrosive might occurred.

Regarding claim 2, Shibata discloses that the recording layer contains an organic dye ([0026], lines 1-3).

Regarding claim 3, Shibata discloses a reflective layer 14 between the substrate 12 and the recording layer 16.

Regarding claim 4, Shibata discloses an intermediate layer 18 between the recording layer 16 and the adhesive layer 20.

Regarding claim 5, JP ('325) discloses the adhesive including the peak of loss modulus at a temperature  $-50^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$  ( $-80^{\circ}\text{C}$  to  $50^{\circ}\text{C}$  includes the range of  $-50^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$  and which is satisfied the claimed range of  $-50^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$ ).

Regarding claim 6, JP ('325) discloses the adhesive including the peak of loss modulus at a temperature  $-40^{\circ}\text{C}$  to  $-25^{\circ}\text{C}$  ( $-80^{\circ}\text{C}$  to  $50^{\circ}\text{C}$  includes the range of  $-40^{\circ}\text{C}$  to  $-25^{\circ}\text{C}$  and which is satisfied the claimed range of  $-40^{\circ}\text{C}$  to  $-25^{\circ}\text{C}$ ).

Regarding claim 7, TABLE 3A of Bennett et al discloses that the  $E1'/E2'$  ratio of 1.5 or less.

Regarding claim 8, TABLE 3A of Bennett et al discloses that the  $E1'/E2'$  ratio of 1.0 or less. (examples 36 and 37).

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata, JP ('325) and Bennett et al as applied to claim 1 above, and further in view of Ooki et al (US. 6,500,511 B1).

Shibata as modified by JP ('325) and Bennett et al do not disclose that the adhesive layer is made of an ultraviolet curable resin (claim 9) or an acrylic pressure-sensitive adhesive (claim 10).

Ooki et al discloses an optical disc having an adhesive layer either made of an ultraviolet curable resin or an acrylic pressure-sensitive adhesive (column 7, lines 14-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to manufacture the adhesive of Shibata as modified by JP ('325) and Bennett et al with an ultraviolet curable resin or an acrylic pressure-sensitive adhesive as taught by Ooki et al to provide a smoother adhesive in order to smoothly filled pits and grooves to provide an uniformly flat surface between two adjacent layers, thus an outstanding flat optical disc is provided.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen T. Cao whose telephone number is (571) 272-7569. The examiner can normally be reached on Mon - Thurs (7:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Cao  
Primary Examiner

AC  
September 2, 2005